

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/551,964
Source: PCT
Date Processed by STIC: 10/18/2005

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 10/18/2005

PATENT APPLICATION: US/10/551,964

TIME: 10:17:42

Input Set : A:\YP-US04017CT(711) SEQUENCE ver 2.txt

Output Set: N:\CRF4\10182005\J551964.raw

```

3 <110> APPLICANT: Yamanouchi Pharmaceutical Co., Ltd.
4     Keio University
5     Yasunaga, Kunio
6     Yamaji, Noboru
7     Suda, Toshio
8     Oike, Yuichi
10 <120> TITLE OF INVENTION: Method of screening antiobesity agents and animal model of
obesity
12 <130> FILE REFERENCE: YK0417PCT711
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/551,964
C--> 14 <141> CURRENT FILING DATE: 2005-10-05
14 <150> PRIOR APPLICATION NUMBER: JP 2003-163016
15 <151> PRIOR FILING DATE: 2003-06-06
17 <150> PRIOR APPLICATION NUMBER: JP 2004-111500
18 <151> PRIOR FILING DATE: 2004-04-05
20 <160> NUMBER OF SEQ ID NOS: 59
22 <170> SOFTWARE: PatentIn version 3.1
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 3028
26 <212> TYPE: DNA
27 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
31 gtcttggeect caggcctctg gcttcttccc caaaaccttg cagtggggga aagggaacacc      60
33 cctcactggt gctgaacatt actctctctc ccccatcggt cctcctctcc ctctctgctc      120
35 tctctggcac cccaattctt cctcctctcc ccagatgtgt tctccctccc cctctgctct      180
37 cccctgtctt ctttctccct cttgtaactt tgtctctgtc atcagttgtc tctttcatca      240
39 tttataactg aagatggaaa ctaaagaagt ttcctttctc tgtgtctggc cccatccctg      300
41 tttctttctt ctcatctgcc tccctgtggt ctctcccatc ctcccatctt ctctctgtct      360
43 ctcccatctt ccccgctctt cctttctctt gccatctccc tatgtctctc ccatctccct      420
45 atgctctctc catctccatc tgtctgactc tctgtattct tcagcccttc tctgtgactt      480
47 atgaagttcc ctccctctct actgccaatg ggggaagccag agggggctga ggggtggggg      540
49 ccgagggggc cagtgtgggg gccccaaccc aggccagag cccagcctgg cagcctctct      600
51 cagatctggg acgaccattt cttttttcaa ccttgagtc cactcgagtt actcgggagc      660
53 tcaggatggt gcagaccagg ggaaggaggt gactctcccg gcgtgtgggt ggtcgctcgt      720
55 ggggcctttg gacaggtctc agaccctggg cctgggctct gtggggctct atgtgagttt      780
57 ctttgtaccc ctgggaaatg actgcatggt tacttcccc agttccgtcc tcgtgtgatt      840
59 tgacttgtgt gaaaatgtga ccgagtgtgt gggagacaga cggtgacctc tgtggtgcgg      900
61 tggataggtt tccgggtgtc aactgtgtgt acctgttttg tatctgtgca ctactgtgtg      960
63 atcacaagaa ccaggatgtg gacaagcctg acacacagat aaagaccacac tcagcccacc      1020
65 ccatttccct ttaagttgtg atgtgtgtgt gaccatattt ggaacataca gttgttgctt      1080
67 gaaactgtta tgtttccagc tgtgtctttt taaaaatttt ttttaataca tgagatatcc      1140
69 tttatttatg aaagcatagt tccaatgcag aagtcaagct ttatggttat atattaggat      1200
71 aggttcagat ccaatatgac aatgtttagc actaacttta acatgttaaa gctctgattc      1260
73 ctgaatgttt ttctcactta atatattctc tccaatgaca agctgggtgtg cttggcttct      1320

```

RAW SEQUENCE LISTING

DATE: 10/18/2005

PATENT APPLICATION: US/10/551,964

TIME: 10:17:42

Input Set : A:\YP-US04017CT(711) SEQUENCE ver 2.txt

Output Set: N:\CRF4\10182005\J551964.raw

```

75 tatgctgaaa aatatatgcc tgaattctat aacaagctat taacaaaatc atgaatagtt 1380
77 aattaaataa gtgccaacac tacatggaac ttactggcca ccaactcaga accataaaac 1440
79 tacacacaca cacacacaca cacacacaca ccacacacac aaacaaaaca aaaaaaacac 1500
81 caaagaaaga tagctatcac tgtacatatg aatactgtcc aggatatcag atcaattatc 1560
83 aaatccaagg tctctggtgt tttgtctcac agtgttgaat atatgaatgc ttctctatta 1620
85 tactgacttg tattattttc aacaaataat tatgtggact caaaatctta catttttatt 1680
87 tctttttctt tttttttttt ttttttgaga cagagtctta ctctgtcgcc caggctggag 1740
89 tgcagtggct cactgcaacc tccgcccccc gggttcaagc gattctcctg cctcagcctc 1800
91 ctgagtagct gggattacag gcatgggcca ccacaccgag caaatttttg tatttttagt 1860
93 agagacgggg tttcaccatc ttggccaggc tgggtctcgaa ttgctgacct cgtgatctgc 1920
95 ccgccttggc ctcccaaagt gctgggatta caggcgtagg ccaccgcgcc cagccttaca 1980
97 tttttatttc taattataaa atccagatta atccaaaaaa cataaatcac atgtaactga 2040
99 ggtagggttt tcactttaag aatatattgt ttctatcaca atttaaaaat ttacagctgt 2100
101 gtcttttata tttatttttt attttaatta attaatctct cactttatta ttattttatt 2160
103 attattttatt tattttattta tttattttatt tttgagatgg aatttcagtc ttgtcgccca 2220
105 ggctggagtg catgcggttg ctcgatctcg gcttactgca acctccacct cctggcttca 2280
107 agcaattctc ctgcctcagc ctcccagata gctgggatta ctggcgcatg ccaccatgcc 2340
109 cagctaattt ttgtattgtt agtagagacg gggtttttagc atgttggcaa ggatggtttc 2400
111 gaactcctga cctcaggtaa tccacctgcc ccggcctccc aaagtgctgg ctttcaggca 2460
113 tgagccactg caccagact ttcgctgggt gttaatgtgt gcgtgcgtgc aaatgtgtgt 2520
115 gtgtgtgttt gtgtccactc tgttatgtgc ccatatgtgt gtgacagctg tgggtgtacat 2580
117 gtgtgagttt ctgagtcaag ctaccttggc tggctcccat cctggtctct ttttggctgt 2640
119 gtgaccgcag gcaagttgct taccctctct gagcctcagt tttccctgct gtaaaatgag 2700
121 ggtacatata gaatccagct cagggttgtaa ggatcaaata cgtaaaagggt gtggagagtt 2760
123 tagagccaag ccctacacac ggtaagtccc cagtgatgtt cctctttcta tgtgtggtgt 2820
125 gtgcgtgtct ggggctggga tcacgcctgg ctgccccagg gcctgcagcc tcccacgctc 2880
127 tgggctctgc agtggagggg gtgggggaaa gggaggggatg tccaggacac tgacctgtgt 2940
129 tatcaggtc tggtggcctg ggcagggggg tctggcaatt ctgtctcatt tctcattcgg 3000
131 gaaatgctaa atatttatag tttgggct 3028
134 <210> SEQ ID NO: 2
135 <211> LENGTH: 1413
136 <212> TYPE: DNA
137 <213> ORGANISM: Homo sapiens
139 <220> FEATURE:
140 <221> NAME/KEY: CDS
141 <222> LOCATION: (1)..(1413)
144 <220> FEATURE:
145 <221> NAME/KEY: mat_peptide
146 <222> LOCATION: (61)..(1410)
149 <400> SEQUENCE: 2
150 atg ggg aag ccc tgg ctg cgt gcg cta cag ctg ctg ctc ctg ctg ggc 48
151 Met Gly Lys Pro Trp Leu Arg Ala Leu Gln Leu Leu Leu Leu Gly
152 -20 -15 -10 -5
154 gcg tcg tgg gcg cgg gcg ggc gcc ccg cgc tgc acc tac acc ttc gtg 96
155 Ala Ser Trp Ala Arg Ala Gly Ala Pro Arg Cys Thr Tyr Thr Phe Val
156 -1 1 5 10
158 ctg ccc ccg cag aag ttc acg ggc gct gtg tgc tgg agc ggc ccc gca 144
159 Leu Pro Pro Gln Lys Phe Thr Gly Ala Val Cys Trp Ser Gly Pro Ala
160 15 20 25

```

RAW SEQUENCE LISTING

DATE: 10/18/2005

PATENT APPLICATION: US/10/551,964

TIME: 10:17:42

Input Set : A:\YP-US04017CT(711) SEQUENCE ver 2.txt

Output Set: N:\CRF4\10182005\J551964.raw

162	tcc	acg	cgg	gcg	acg	ccc	gag	gcc	gcc	aac	gcc	agc	gag	ctg	gcg	gcg	192
163	Ser	Thr	Arg	Ala	Thr	Pro	Glu	Ala	Ala	Asn	Ala	Ser	Glu	Leu	Ala	Ala	
164		30					35					40					
166	ctg	cgc	atg	cgc	gtc	ggc	cgc	cac	gag	gag	ctg	tta	cgc	gag	ctg	cag	240
167	Leu	Arg	Met	Arg	Val	Gly	Arg	His	Glu	Glu	Leu	Leu	Arg	Glu	Leu	Gln	
168	45					50					55				60		
170	agg	ctg	gcg	gcg	gcc	gac	ggc	gcc	gtg	gcc	ggc	gag	gtg	cgc	gcg	ctg	288
171	Arg	Leu	Ala	Ala	Ala	Asp	Gly	Ala	Val	Ala	Gly	Glu	Val	Arg	Ala	Leu	
172					65					70					75		
174	cgc	aag	gag	agc	cgc	ggc	ctg	agc	gcg	cgc	ctg	ggc	cag	ttg	cgc	gcg	336
175	Arg	Lys	Glu	Ser	Arg	Gly	Leu	Ser	Ala	Arg	Leu	Gly	Gln	Leu	Arg	Ala	
176				80					85				90				
178	cag	ctg	cag	cac	gag	gcg	ggg	ccc	ggg	gcg	ggc	ccg	ggg	gcg	gat	ctg	384
179	Gln	Leu	Gln	His	Glu	Ala	Gly	Pro	Gly	Ala	Gly	Pro	Gly	Ala	Asp	Leu	
180		95					100					105					
182	ggg	gcg	gag	cct	gcc	gcg	gcg	ctg	gcg	ctg	ctc	ggg	gag	cgc	gtg	ctc	432
183	Gly	Ala	Glu	Pro	Ala	Ala	Ala	Leu	Ala	Leu	Leu	Gly	Glu	Arg	Val	Leu	
184		110					115					120					
186	aac	gcg	tcc	gcc	gag	gct	cag	cgc	gca	gcc	gcc	cgg	ttc	cac	cag	ctg	480
187	Asn	Ala	Ser	Ala	Glu	Ala	Gln	Arg	Ala	Ala	Ala	Arg	Phe	His	Gln	Leu	
188	125					130					135				140		
190	gac	gtc	aag	ttc	cgc	gag	ctg	gcg	cag	ctc	gtc	acc	cag	cag	agc	agt	528
191	Asp	Val	Lys	Phe	Arg	Glu	Leu	Ala	Gln	Leu	Val	Thr	Gln	Gln	Ser	Ser	
192					145				150				155				
194	ctc	atc	gcc	cgc	ctg	gag	cgc	ctg	tgc	ccg	gga	ggc	gcg	ggc	ggg	cag	576
195	Leu	Ile	Ala	Arg	Leu	Glu	Arg	Leu	Cys	Pro	Gly	Gly	Ala	Gly	Gly	Gln	
196				160					165				170				
198	cag	cag	gtc	ctg	ccg	cca	ccc	cca	ctg	gtg	cct	gtg	gtt	ccg	gtc	cgt	624
199	Gln	Gln	Val	Leu	Pro	Pro	Pro	Pro	Leu	Val	Pro	Val	Val	Pro	Val	Arg	
200			175				180					185					
202	ctt	gtg	ggt	agc	acc	agt	gac	acc	agt	agg	atg	ctg	gac	cca	gcc	cca	672
203	Leu	Val	Gly	Ser	Thr	Ser	Asp	Thr	Ser	Arg	Met	Leu	Asp	Pro	Ala	Pro	
204		190					195					200					
206	gag	ccc	cag	aga	gac	cag	acc	cag	aga	cag	cag	gag	ccc	atg	gct	tct	720
207	Glu	Pro	Gln	Arg	Asp	Gln	Thr	Gln	Arg	Gln	Gln	Glu	Pro	Met	Ala	Ser	
208	205					210					215				220		
210	ccc	atg	cct	gca	ggt	cac	cct	gcg	gtc	ccc	acc	aag	cct	gtg	ggc	ccg	768
211	Pro	Met	Pro	Ala	Gly	His	Pro	Ala	Val	Pro	Thr	Lys	Pro	Val	Gly	Pro	
212				225					230				235				
214	tgg	cag	gat	tgt	gca	gag	gcc	cgc	cag	gca	ggc	cat	gaa	cag	agt	gga	816
215	Trp	Gln	Asp	Cys	Ala	Glu	Ala	Arg	Gln	Ala	Gly	His	Glu	Gln	Ser	Gly	
216				240					245				250				
218	gtg	tat	gaa	ctg	cga	gtg	ggc	cgt	cac	gta	gtg	tca	gta	tgg	tgt	gag	864
219	Val	Tyr	Glu	Leu	Arg	Val	Gly	Arg	His	Val	Val	Ser	Val	Trp	Cys	Glu	
220			255				260					265					
222	cag	caa	ctg	gag	ggt	gga	ggc	tgg	act	gtg	atc	cag	cgg	agg	caa	gat	912
223	Gln	Gln	Leu	Glu	Gly	Gly	Gly	Trp	Thr	Val	Ile	Gln	Arg	Arg	Gln	Asp	
224		270					275					280					
226	ggt	tca	gtc	aac	ttc	ttc	act	acc	tgg	cag	cac	tat	aag	gcg	ggc	ttt	960

RAW SEQUENCE LISTING

DATE: 10/18/2005

PATENT APPLICATION: US/10/551,964

TIME: 10:17:42

Input Set : A:\YP-US04017CT(711) SEQUENCE ver 2.txt

Output Set: N:\CRF4\10182005\J551964.raw

```

227 Gly Ser Val Asn Phe Phe Thr Thr Trp Gln His Tyr Lys Ala Gly Phe
228 285                290                295                300
230 ggg cgg cca gac gga gaa tac tgg ctg ggc ctt gaa ccc gtg tat cag      1008
231 Gly Arg Pro Asp Gly Glu Tyr Trp Leu Gly Leu Glu Pro Val Tyr Gln
232                305                310                315
234 ctg acc agc cgt ggg gac cat gag ctg ctg gtt ctc ctg gag gac tgg      1056
235 Leu Thr Ser Arg Gly Asp His Glu Leu Leu Val Leu Leu Glu Asp Trp
236                320                325                330
238 ggg ggc cgt gga gca cgt gcc cac tat gat ggc ttc tcc ctg gaa ccc      1104
239 Gly Gly Arg Gly Ala Arg Ala His Tyr Asp Gly Phe Ser Leu Glu Pro
240                335                340                345
242 gag agc gac cac tac cgc ctg cgg ctt ggc cag tac cat ggt gat gct      1152
243 Glu Ser Asp His Tyr Arg Leu Arg Leu Gly Gln Tyr His Gly Asp Ala
244                350                355                360
246 gga gac tct ctt tcc tgg cac aat gac aag ccc ttc agc acc gtg gat      1200
247 Gly Asp Ser Leu Ser Trp His Asn Asp Lys Pro Phe Ser Thr Val Asp
248 365                370                375                380
250 agg gac cga gac tcc tat tct ggt aac tgt gcc ctg tac cag cgg gga      1248
251 Arg Asp Arg Asp Ser Tyr Ser Gly Asn Cys Ala Leu Tyr Gln Arg Gly
252                385                390                395
254 ggc tgg tgg tac cat gcc tgt gcc cac tcc aac ctc aac ggt gtg tgg      1296
255 Gly Trp Trp Tyr His Ala Cys Ala His Ser Asn Leu Asn Gly Val Trp
256                400                405                410
258 cac cac ggc ggc cac tac cga agc cgc tac cag gat ggt gtc tac tgg      1344
259 His His Gly Gly His Tyr Arg Ser Arg Tyr Gln Asp Gly Val Tyr Trp
260                415                420                425
262 gct gag ttt cgt ggt ggg gca tat tct ctc agg aag gcc gcc atg ctc      1392
263 Ala Glu Phe Arg Gly Gly Ala Tyr Ser Leu Arg Lys Ala Ala Met Leu
264                430                435                440
266 att cgg ccc ctg aag ctg tga      1413
267 Ile Arg Pro Leu Lys Leu
268 445                450
271 <210> SEQ ID NO: 3
272 <211> LENGTH: 470
273 <212> TYPE: PRT
274 <213> ORGANISM: Homo sapiens
276 <400> SEQUENCE: 3
278 Met Gly Lys Pro Trp Leu Arg Ala Leu Gln Leu Leu Leu Leu Leu Gly
279 -20                -15                -10                -5
282 Ala Ser Trp Ala Arg Ala Gly Ala Pro Arg Cys Thr Tyr Thr Phe Val
283                -1 1                5                10
286 Leu Pro Pro Gln Lys Phe Thr Gly Ala Val Cys Trp Ser Gly Pro Ala
287                15                20                25
290 Ser Thr Arg Ala Thr Pro Glu Ala Ala Asn Ala Ser Glu Leu Ala Ala
291                30                35                40
294 Leu Arg Met Arg Val Gly Arg His Glu Glu Leu Leu Arg Glu Leu Gln
295 45                50                55                60
298 Arg Leu Ala Ala Ala Asp Gly Ala Val Ala Gly Glu Val Arg Ala Leu
299                65                70                75

```

RAW SEQUENCE LISTING

DATE: 10/18/2005

PATENT APPLICATION: US/10/551,964

TIME: 10:17:42

Input Set : A:\YP-US04017CT(711) SEQUENCE ver 2.txt

Output Set: N:\CRF4\10182005\J551964.raw

```

302 Arg Lys Glu Ser Arg Gly Leu Ser Ala Arg Leu Gly Gln Leu Arg Ala
303      80      85      90
306 Gln Leu Gln His Glu Ala Gly Pro Gly Ala Gly Pro Gly Ala Asp Leu
307      95      100      105
310 Gly Ala Glu Pro Ala Ala Ala Leu Ala Leu Leu Gly Glu Arg Val Leu
311     110     115     120
314 Asn Ala Ser Ala Glu Ala Gln Arg Ala Ala Ala Arg Phe His Gln Leu
315 125      130      135      140
318 Asp Val Lys Phe Arg Glu Leu Ala Gln Leu Val Thr Gln Gln Ser Ser
319      145      150      155
322 Leu Ile Ala Arg Leu Glu Arg Leu Cys Pro Gly Gly Ala Gly Gly Gln
323      160      165      170
326 Gln Gln Val Leu Pro Pro Pro Pro Leu Val Pro Val Val Pro Val Arg
327      175      180      185
330 Leu Val Gly Ser Thr Ser Asp Thr Ser Arg Met Leu Asp Pro Ala Pro
331      190      195      200
334 Glu Pro Gln Arg Asp Gln Thr Gln Arg Gln Gln Glu Pro Met Ala Ser
335 205      210      215      220
338 Pro Met Pro Ala Gly His Pro Ala Val Pro Thr Lys Pro Val Gly Pro
339      225      230      235
342 Trp Gln Asp Cys Ala Glu Ala Arg Gln Ala Gly His Glu Gln Ser Gly
343      240      245      250
346 Val Tyr Glu Leu Arg Val Gly Arg His Val Val Ser Val Trp Cys Glu
347      255      260      265
350 Gln Gln Leu Glu Gly Gly Gly Trp Thr Val Ile Gln Arg Arg Gln Asp
351      270      275      280
354 Gly Ser Val Asn Phe Phe Thr Thr Trp Gln His Tyr Lys Ala Gly Phe
355 285      290      295      300
358 Gly Arg Pro Asp Gly Glu Tyr Trp Leu Gly Leu Glu Pro Val Tyr Gln
359      305      310      315
362 Leu Thr Ser Arg Gly Asp His Glu Leu Val Leu Leu Glu Asp Trp
363      320      325      330
366 Gly Gly Arg Gly Ala Arg Ala His Tyr Asp Gly Phe Ser Leu Glu Pro
367      335      340      345
370 Glu Ser Asp His Tyr Arg Leu Arg Leu Gly Gln Tyr His Gly Asp Ala
371      350      355      360
374 Gly Asp Ser Leu Ser Trp His Asn Asp Lys Pro Phe Ser Thr Val Asp
375 365      370      375      380
378 Arg Asp Arg Asp Ser Tyr Ser Gly Asn Cys Ala Leu Tyr Gln Arg Gly
379      385      390      395
382 Gly Trp Trp Tyr His Ala Cys Ala His Ser Asn Leu Asn Gly Val Trp
383      400      405      410
386 His His Gly Gly His Tyr Arg Ser Arg Tyr Gln Asp Gly Val Tyr Trp
387      415      420      425
390 Ala Glu Phe Arg Gly Gly Ala Tyr Ser Leu Arg Lys Ala Ala Met Leu
391      430      435      440
394 Ile Arg Pro Leu Lys Leu
395 445      450
398 <210> SEQ ID NO: 4

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/551,964

DATE: 10/18/2005

TIME: 10:17:43

Input Set : A:\YP-US04017CT(711) SEQUENCE ver 2.txt

Output Set: N:\CRF4\10182005\J551964.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date